

Appln. No. 10/590,054
Amendment dated December 23, 2008
Reply to Office Action dated June 23, 2008

REMARKS

The Official Action of June 23, 2008, and the prior art relied upon therein have been carefully reviewed. The claims in the application are now claims 1-7, 9-12, and 14-20, and these claims define patentable subject matter warranting their allowance.

Acknowledgement by the PTO of the receipt of applicants' papers filed under Section 119 is noted.

Claim 4 has been rejected under the second paragraph of Section 112. The rejection is respectfully traversed.

Applicants do not understand why the term "preparing" is confusing, as "preparing" is a perfectly good English language verb. Moreover, applicants do not see that the word "preparing" is even in claim 4.

Nevertheless, some amendments have been made in claim 4 to place the claim in better form for U.S. practice.

Withdrawal of the rejection is in order and is respectfully requested.

Applicants note that no other rejections have been imposed under the second paragraph of Section 112, whereby applicants understand that all the other claims are deemed by

the PTO to be in a form fully in accordance with the second paragraph of Section 112, and applicants are proceeding in reliance thereof.

Claims 1, 2, and 11-15 have been rejected under the first paragraph of Section 112, as lacking enablement for all the subject matter claimed. In addition, there is a second rejection under the first paragraph of Section 112, of claims 1-15, also as allegedly lacking enablement. These rejections are respectfully traversed.

First, reference to "prodrugs" has been removed from the claims, which (as best understood) would seem to obviate the second of the two rejections under the first paragraph of Section 112, namely the rejection of claims 1-15 as not reasonably providing enablement for making prodrugs.

As regards the first rejection under the first paragraph of Section 112, namely the rejection of claims 1, 2 and 11-15, the PTO alleges that the *in vitro* results set for the in the present application cannot be extrapolated to any *in vivo* enablement. Applicants respectfully take the strongest issue with this conclusion. There are many, many, many U.S. patents which have issued in the pharmaceutical arts wherein the examples only contain *in vitro* results. Those skilled in the present art are highly skilled individuals, and

they could readily use the compounds of the present invention with at most only **routine** experimentation, clearly permitted under the first paragraph of Section 112. Applicants should be able to rely on the law in this regard.

Nevertheless, so there would be no doubt whatsoever, attached is a declaration in lieu of affidavit under 37 CFR 1.132 by Dr. Nina Mohell, a non-inventor, but a person involved in and closely familiar with the present invention. The attached Declaration of Dr. Mohall includes a plurality of test results involving the claimed subject matter, including *in vivo* test, and protocols relating thereto as well as results obtained. The Declaration establishes as evidence that those skilled in the art are capable of practicing the present invention, i.e., they are enabled by the present disclosure. Dr. Mohell concludes at the top of page 17 with her statement of fact that the experiments involved and reported were routine, and demonstrate pharmacological activity, as well as diseases which would benefit from such activity.

Withdrawal of the rejections under the first paragraph of Section 112 is in order and is respectfully requested.

Claims 1-15 have been rejected under Section 102 as anticipated by Bykov et al WO 2002024692 (Bykov). This rejection is respectfully traversed.

Bykov relates to an azabicyclo[2.2.2]octan-3-one, optionally substituted in the 2-position with R_2 and R_3 selected from C1-15 alkyl, C1-15 alkenyl, C1-15 alkynyl, C1-15 alkoxy, C1-15 alkylamino, aryl, C6-15 aryl alkyl, C1-15 alkyl carboxy, C2-15 alkyl alkyl carboxylate, C1-15 alkylthio, C1-15 alkyl hydroxy, wherein said groups optionally can be substituted with halogen.

Bykov teaches that one preferred compound is 2,2-bis(hydroxymethyl)-1-azabicyclo[2.2.2]octan-3-one. This compound was disclaimed in claim 1 of the present application as filed. In the enclosed set of claim, R^1 and R^2 may no longer be $-\text{CH}_2-\text{NR}^4\text{R}^5$. The other options available for R^1 and R^2 of present claim 1 are not mentioned as substituents on the bicyclo in Bykov and therefore Bykov does not anticipate claim 1 as amended.

As Bykov does not anticipate claim 1, Bykov also does not anticipate any of the other claims in the present application. Withdrawal of the rejection is in order and is respectfully requested.

In separate rejections, claims 3 and 5 have been rejected under Section 102 as being anticipated by Nielsen (paragraph 7 of the Office Action) by Singh (paragraph 8 of the Office Action) and by Shimizu (paragraph 9 of the Office Action). In addition, claims 3-10 are rejected under Section 102 as being anticipated by Elkin (paragraph 10 of the Office Action), and claims 3 and 5 are also rejected under Section 102 as being anticipated by Dickinson (paragraph 11 of the Office Action). These rejections are respectfully traversed.

All of these rejections are based on what appears to be a misinterpretation of claim 3 as filed, since in claim 3 as filed R^1 and R^2 were selected from H, $-\text{CH}_2-\text{O}-\text{CO}-R^5$, $-\text{CH}_2-\text{O}-\text{CO}-\text{NR}^4R^5$ and $-\text{CH}_2-\text{O}-\text{CO}-\text{OR}^5$. In other words, in the application as filed neither R^1 and R^2 of claim 3 could be a group of the $-\text{CH}_2$ -amino or $-\text{CH}_2$ -hydroxy type, as in the applied prior art references. Please note that in the amended claims, either R^1 and R^2 , but not both, can be $-\text{CH}_2\text{OH}$, with the proviso that at least one is selected from $-\text{CH}_2-\text{O}-\text{CO}-R^5$, $-\text{CH}_2-\text{O}-\text{CO}-\text{NR}^4R^5$ and $-\text{CH}_2-\text{O}-\text{CO}-\text{OR}^5$, which makes superfluous the original proviso (of claim 3) that both R^1 and R^2 may not be H.

Respectfully, it should be clear that none of the references anticipate claim 3, or claim 5 which depends from and incorporate the subject matter of claim 3, or claims 4, 5-

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7, 9 and 10, which also incorporate the subject matter of claim 3.

Withdrawal of the rejections is in order and is respectfully requested.

The prior art documents of record and not relied upon by the PTO have been noted, along with the implication that such documents are deemed by the PTO to be insufficiently material to warrant their application against any of applicants' claims.

Applicants believe that all issues raised in the Official Action have been addressed above in a manner that should lead to patentability of the present application. Favorable consideration and early formal allowance are respectfully requested.

Respectfully submitted,

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